

IN THE CLAIMS

1. (currently amended) An outermost surface covering not less than 55% of stainless steel comprising from 20 to 50 weight % of Ni, said surface having a resistance to coke formation when the stainless steel is exposed to a hydrocarbon environment at high temperatures and having a thickness from 0.1 to 10 microns and substantially comprising a spinel of the formula $MnCr_2O_4$.
2. (original) The surface according to claim 1, wherein the stainless steel comprises from 13 to 50 weight % of Cr and 0.2 to 3.0 weight % Mn.
3. (original) The surface according to claim 2, wherein the stainless steel comprises from 20 to 38 weight % of Cr and 0.5 to 2.0 weight % Mn.
4. (currently amended) The surface according to claim 3, wherein the stainless steel further comprises ~~from 20 to 50 weight % of Ni~~, from 0.3 to 2.0 weight % of Si and less than 5 weight % of titanium, niobium and all other trace metals, and carbon in an amount less than 0.75 weight %.
5. (original) The surface according to claim 4, covering not less than 60% of the stainless steel.
6. (original) The surface according to claim 4, covering not less than 80% of the stainless steel.

7. (original) The surface according to claim 4, covering not less than 95% of the stainless steel.

8. (cancelled)

9. (cancelled)

10. (cancelled)

11. (previously presented) A stainless steel pipe or tube having an inner surface according to claim 5.

12. (previously presented) A stainless steel pipe or tube having an inner surface according to claim 6.

13. (previously presented) A stainless steel pipe or tube having an inner surface according to claim 7.

14. (previously presented) A stainless steel reactor having an inner surface according to claim 5.

15. (previously presented) A stainless steel reactor having an inner surface according to claim 6.

16. (previously presented) A stainless steel reactor having an inner surface according to claim 7.
17. (previously presented) A stainless steel heat exchange having an inner surface according to claim 5.
18. (previously presented) A stainless steel heat exchange having an inner surface according to claim 6.
19. (previously presented) A stainless steel heat exchange having an inner surface according to claim 7.
20. (previously presented) A heat exchange having a cooling surface comprising stainless steel according to claim 5.
21. (previously presented) A heat exchange having a cooling surface comprising stainless steel according to claim 6.
22. (previously presented) A heat exchange having a cooling surface comprising stainless steel according to claim 7.

23. (withdrawn) A process for the thermal cracking of a hydrocarbon comprising passing said hydrocarbon at elevated temperatures through stainless steel tubes, pipes, or coils according to claim 11.

24. (withdrawn) A process for the thermal cracking of a hydrocarbon comprising passing said hydrocarbon at elevated temperatures through stainless steel tubes, pipes, or coils according to claim 12.

25. (withdrawn) A process for the thermal cracking of a hydrocarbon comprising passing said hydrocarbon at elevated temperatures through stainless steel tubes, pipes, or coils according to claim 13.

26. (withdrawn) A process for altering the enthalpy of a fluid comprising passing the fluid through a heat exchanger according to claim 17.

27. (withdrawn) A process for altering the enthalpy of a fluid comprising passing the fluid through a heat exchanger according to claim 18.

28. (withdrawn) A process for altering the enthalpy of a fluid comprising passing the fluid through a heat exchanger according to claim 19.

29. (withdrawn) A process for altering the enthalpy of a fluid comprising passing the fluid through a heat exchanger according to claim 20.

30. (withdrawn) A process for altering the enthalpy of a fluid comprising passing the fluid over a heat exchanger according to claim 21.

31. (withdrawn) A process for altering the enthalpy of a fluid comprising passing the fluid over a heat exchanger according to claim 22.